









## Safe Harbor Statement

Statements in this presentation may contain forward-looking statements as contemplated by the 1995 Private Securities Litigation Reform Act that are based on management's current outlook, expectations, estimates and projections. Words such as "anticipates," "believes," "continues," "could," "designed," "effect," "estimates," "evaluates," "expects," "forecasts," "goal," "guidance," "initiative," "intends," "may," "outlook," "plans," "potential," "predicts," "project," "pursue," "seek," "should," "target," "when," "will," "would," variations of such words and similar expressions are intended to identify such forward-looking statements. Forward-looking statements are subject to risks and uncertainties, many of which are difficult to predict and generally beyond our control, that could cause actual results to differ materially from those expressed, projected or implied in or by the forward-looking statements. These risks and uncertainties, among others, include: our dependence on automotive and truck production, both of which are highly cyclical; our reliance on major OEM customers; commodities availability and pricing; supply disruptions; fluctuations in interest rates and foreign currency exchange rates; availability of credit; our dependence on key management; our dependence on information systems; the uncertainty of the global economic environment; the outcome of existing or any future legal proceedings, including litigation with respect to various claims; and future changes in laws and regulations, including by way of example, tariffs, in the countries in which we operate, as well as other risks noted in reports that we file with the Securities and Exchange Commission, including the Risk Factors identified in our most recently filed Annual Report on Form 10-K/A. We do not undertake any obligation to update or announce publicly any updates to or revision to any of the forward-looking statements.



## BorgWarner Today

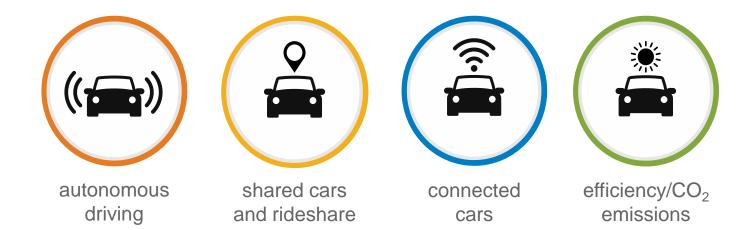
- **Executing Balanced Propulsion Strategy**
- Product Leadership Remains the Driver of Our Business
- Strong Operational Discipline, with Areas to Improve
- Delivering







#### Addressing Vehicle Mobility Trends

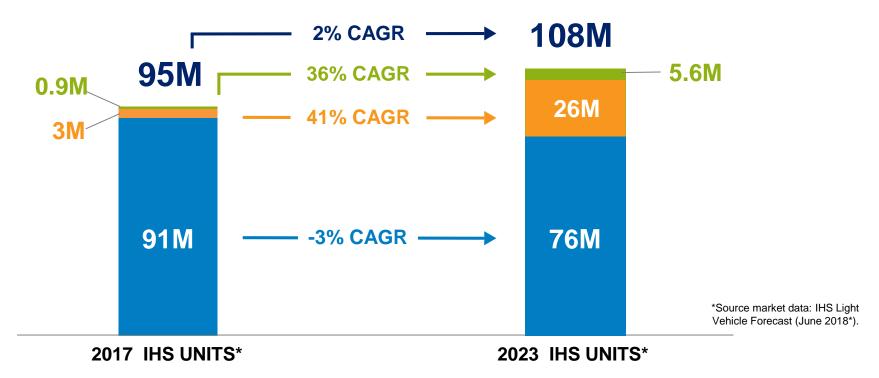


## THERE WILL ALWAYS BE A NEED FOR A PROPULSION SYSTEM



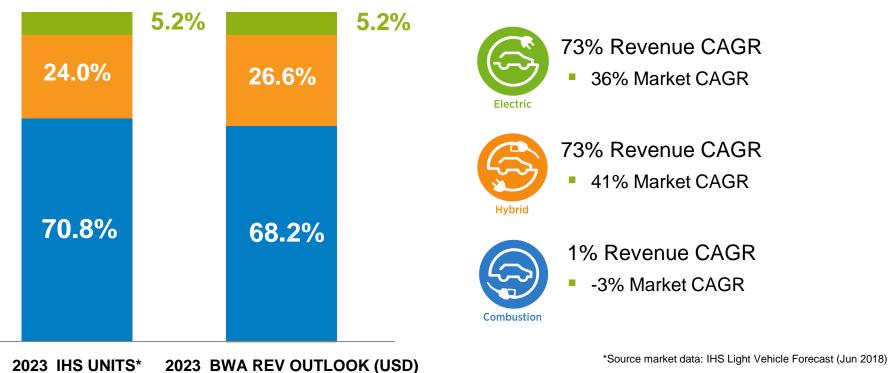
## IHS Light Vehicle Projections







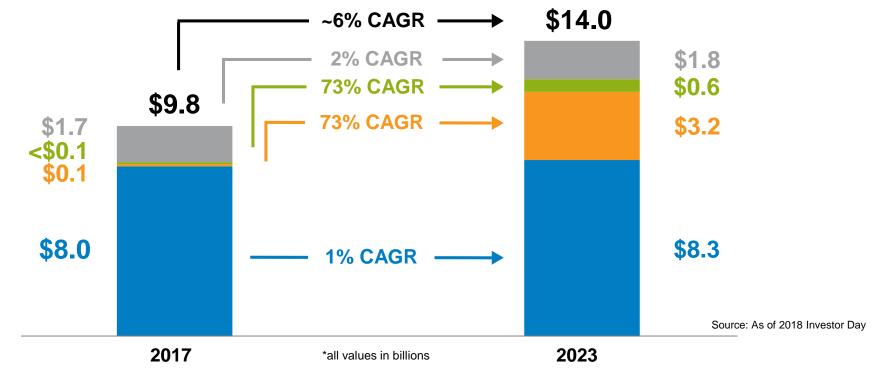
### Overweight Hybrid and Electric by 2023





## 2023 Revenue Outlook of \$14.0 Billion







## Combustion Still Growing



- Demand for BorgWarner products continues to grow in combustion propulsion
- Innovation focused on efficient and clean combustion

 Hybrids are an additional demand driver for efficient ICE products

## Combustion Propulsion Technology\*



\* Includes engines, transmissions and all-wheel drive systems with no electrification, includes stop/start. All prices are estimates, actual prices will vary.

#### Combustion Products:

- Timing system
- Variable cam timing
- Exhaust gas recirculation
- Clutch plates
- All-wheel drive systems
- Enhanced starters
- Fans & fan drives
- Pictured products and many more...



**Variable Cam Timing** 







**Exhaust Gas** Management





**Boosting Technologies** 



**Transmission Technologies** 

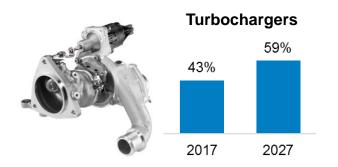
**\$250 | \$350** 

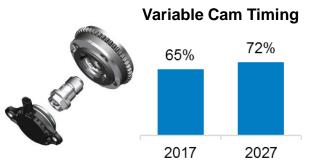


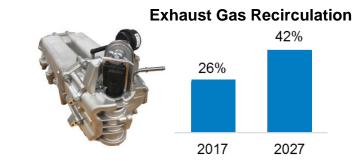
#### Penetration Rates Continue to Grow



#### Technology Penetration % - Combustion Only





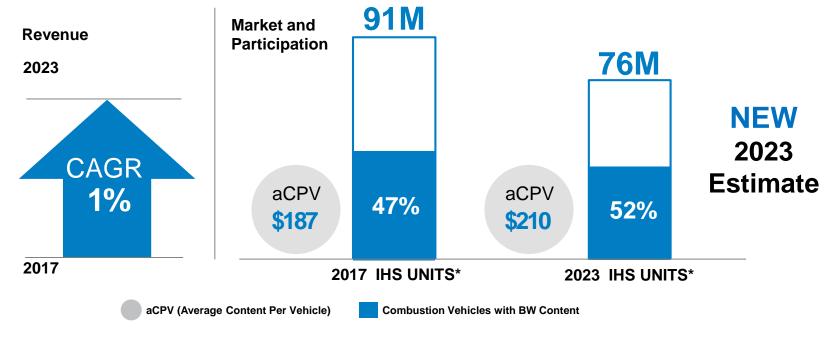






## Combustion Still Growing





<sup>\*</sup>Source market data: IHS Light Vehicle Forecast (June 2018). All values are approximate.



## Significant Revenue Growth



Strong global market growth

 Right products and portfolio depth is driving leading position

Overweight hybrid business by 2023

## Hybrid Propulsion Technology\*

Hybrid

\* Includes mild, full and plug-in hybrid. All prices are estimates, actual prices will vary.

## **Combustion Products PLUS Hybrid Specific Products:**

- Exhaust heat recovery systems
- Electric drive motors
- Disconnect clutch and controls
- Pictured products and many more...



eBooster

\$250



Integrated Motor Generator

\$400



**Power Electronics** 

\$600



P2 Hybrid Modules On/Off Axis

\$900





**Electric All-Wheel Drive** 

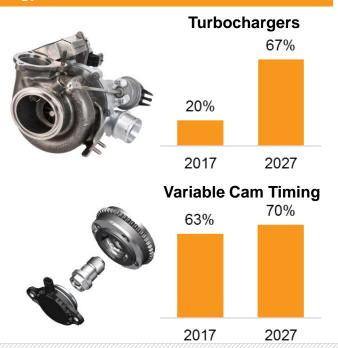
\$1200

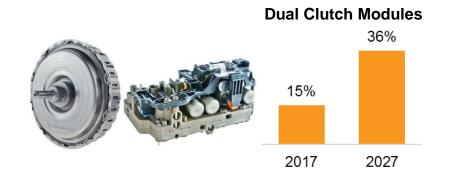


#### Penetration Rates Continue to Grow



#### Technology Penetration %







#### **Customers Pursuing Broad Electrification Strategies**

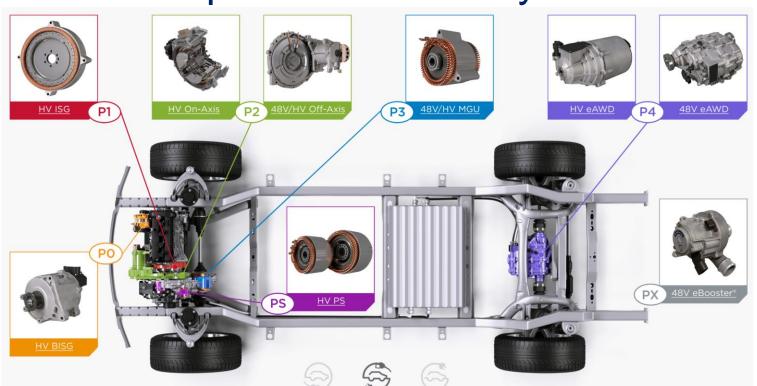


✓ producing/developing	Hybrid				Electric		
	P0	P1	P2	P3	P4	PS	BEV
Customer A	✓		✓	✓	✓		✓
В	✓		✓			✓	✓
С	✓		✓		✓		✓
D	✓		✓		✓	✓	✓
E	✓		✓	✓	✓		✓
F	✓	✓	✓		✓		✓
G	✓		✓	✓	✓	✓	✓
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## Broad Expertise Across Hybrid Platforms

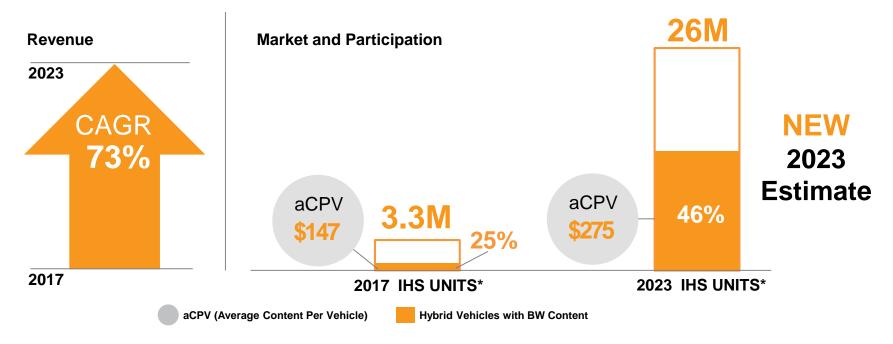




- BISG Belt Integrated Starter Generator
- MGU Motor
  Generator Unit
- PS Power Split

## Significantly Increasing Penetration and aCPV





<sup>\*</sup>Source market data: IHS Light Vehicle Forecast (June 2018). All values are approximate.



## Full System Expertise Driving Growth



 Uniquely positioned to provide complete propulsion solutions for Electric vehicles

 Wide variety of products fitting customers needs

 Leveraging system competence to win business

## Electric Propulsion Technology\*



\* Includes battery electric vehicles, range extenders and fuel cells. All prices are estimates, actual prices will vary.

#### **Electric Vehicle Products:**

- Battery Heater
- Fuel Cell air supply
- Transmission Chain
- Battery Charger
- On-Board Charger
- Friction Plates
- Pictured products and many more...



**Cabin Heater** 

\$150





EV Transmission eGearDrive®

\$500



**Electric Drive Motor** 

\$700



**Power Electronics** 

\$600



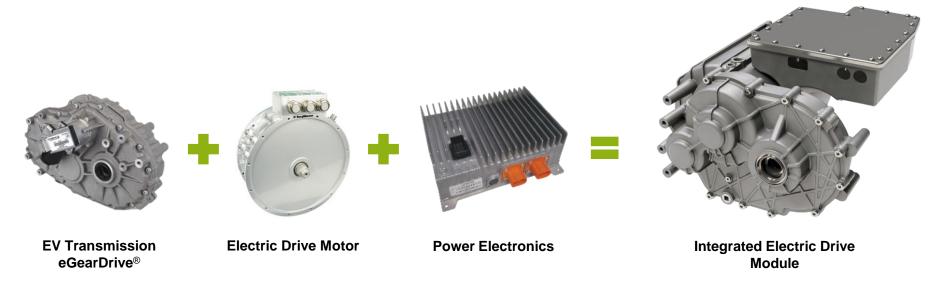
**Electric Drive Module** 

\$1100



## Full Electric Propulsion System Expertise





#### **Specify, Develop and Manufacture**



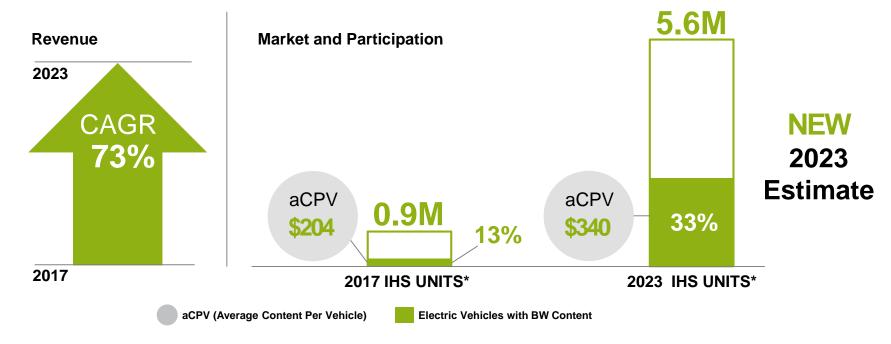






## Full System Expertise Driving Growth





<sup>\*</sup>Source market data: IHS Light Vehicle Forecast (June 2018). All values are approximate.



#### Electrification Accelerates Revenue Opportunities



**Estimated Participation Rate & Average Content Per Light Vehicle 2023** 



## Margins Poised to Expand Through 2023





## Capital Deployment Discipline





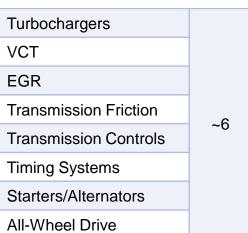




## Competitive Landscape

Average number of major competitors is similar for each product category







Belt Alternator Starters	
Hybrid Drive Motors	
Disconnect Clutches	E
Hybrid Modules	~5
Power Electronics	
eBooster	



Drive Motors	
Transmissions	
Power Electronics	~6
Battery Thermal Mgmt	
Cabin Heating	



## Significant Free Cash Flow Leverage





#### Recent Product Announcements



High Voltage Hairpin 410 Electric Motor for a major European commercial vehicle manufacturer.



P2 On-Axis Hybrid Module for two Leading Chinese automakers.



Coolant Heater for two New Electric Vehicles, one located in Europe and one in Asia.

**High-Voltage** 



High-Voltage Cabin Heater For NIO ES8 Electric SUV.





- \$14 Billion Revenue Outlook
- Overweight Hybrid and Electric by 2023
- \$1 Billion Free Cash Flow Outlook
- Electrification Accelerates Opportunities





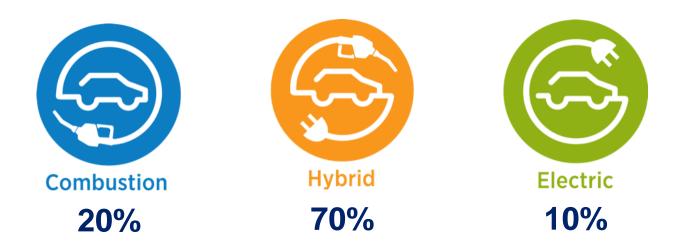








### Strong Backlog Across Light Vehicle C-H-E Products

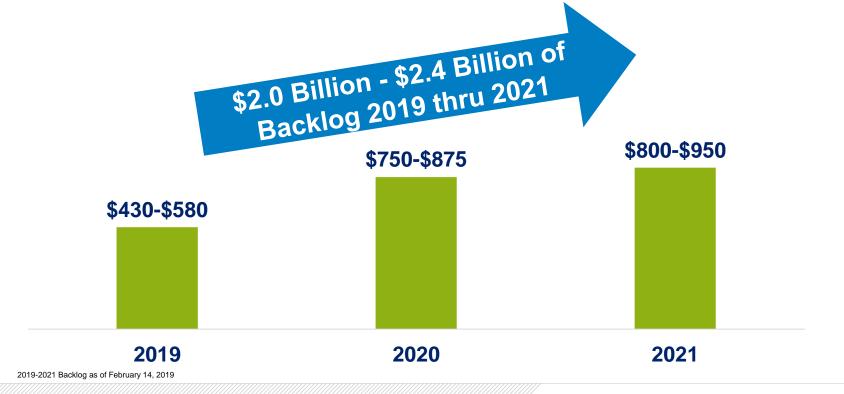


80% of Backlog Related to Hybrid and Electric Propulsion

2019-2021 Backlog as of February 14, 2019



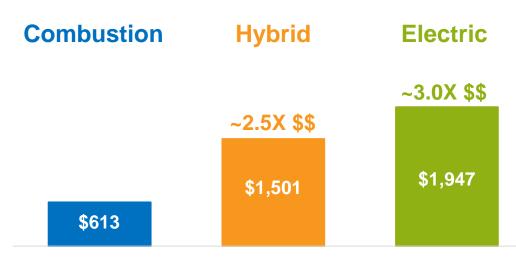
## Backlog Supports Average Outgrowth of 500-600bps





# Significantly Higher Content Opportunities in Hybrid and Electric

2023 BorgWarner Content Opportunity Per Vehicle Summary



Market Volumes	76M	26M	5.6M
Addressable Market	\$47B	\$39B	\$11B



#### **Combustion Opportunity**





Market Volumes	91M	76M / (3%)
BorgWarner Content Opportunity Per Vehicle	\$607	\$613
BorgWarner Rev. CAGR ('17-'23)		1%

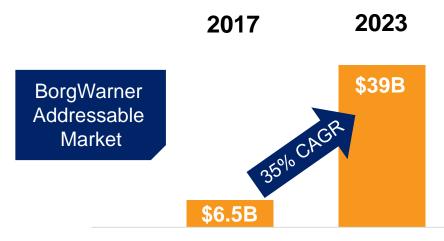
#### Takeaways

- Combustion remains largest market opportunity
- Growth despite declining market volumes
  - Revenues continue to rise
  - Driven by product penetration gains



### **Hybrid Opportunity**





Market Volumes	3.3M	26M / 41%	
BorgWarner Content Opportunity Per Vehicle	\$1,994	\$1,501	
BorgWarner Rev. CAGR ('17-'23)		73%	

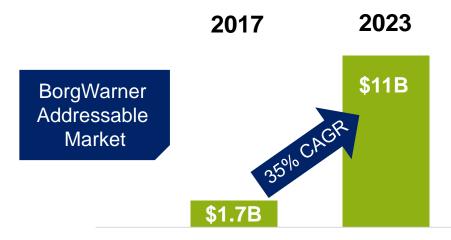
#### **Takeaways**

- Average Hybrid Cost to Customers declines
  - Current volumes low, led by PS
  - Higher volume content on P0/P1/P2, shifting from PS
- Opportunity in Hybrid is 2.5x that of Combustion
- Revenue CAGR close to double that of market
- Significant share gains



### **Electric Opportunity**





Market Volumes	0.9M	5.6M / 36%	
BorgWarner Content Opportunity Per Vehicle	\$1,854	\$1,947	
BorgWarner Rev. CAGR ('17-'23)		73%	

#### **Takeaways**

- Average content opportunity increasing
  - Despite prices decreasing
  - Driven by higher AWD penetration
- Opportunity in Electric is more the 3x that of Combustion
- CAGR more than double that of market
- Significant share gains



## 2019 Guidance

Sales

EPS Guidance

Free Cash Flow

CapEx

Share Repurchases

R&D Spending

Tax Rate

FY'19 FX Revenue Impact

\$9.90 - \$10.37 billion

\$4.00 - \$4.35

\$550 - \$600 million

\$575 - \$625 million

~\$100 million

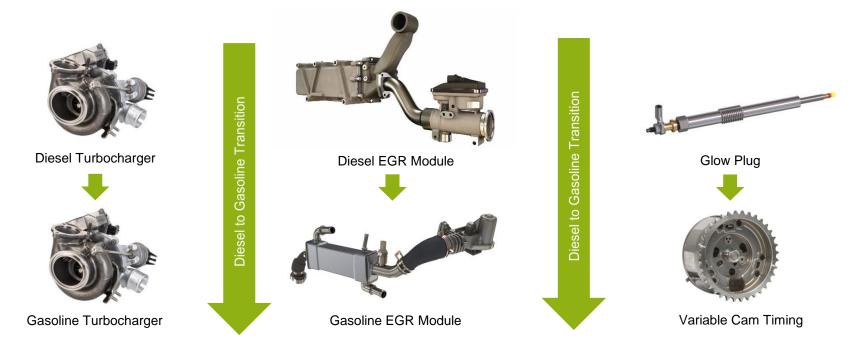
Low 4% of sales

~26%

~\$(280)M



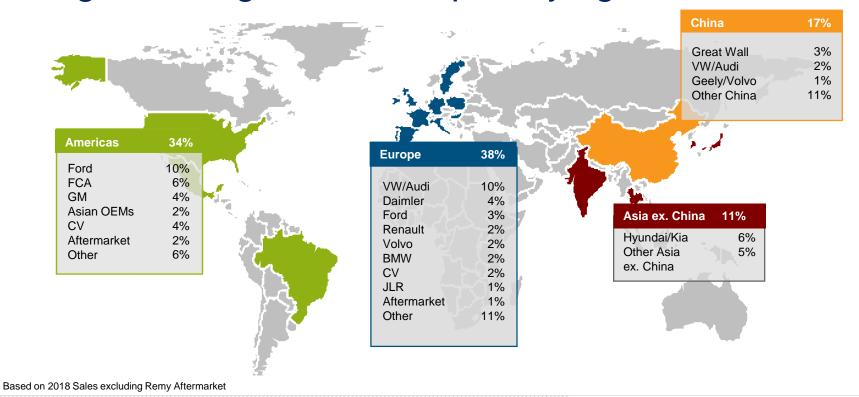
### Diesel Transition Manageable Over the Mid-term



Revenue impact is neutralized by the end of the end of 2020



### Long-Standing Relationships Paying Off





#### Combustion Awards Secured Into Next Decade



- Gas <2.0L turbocharger EU (2020, 2021, 2022), Asia (2018, 2020, 2021)
- Gas <1.5L turbocharger EU (2020), Asia (2018, 2019, 2020, 2022)</li>
- Variable Cam Timing EU (2019, 2021), Asia (2019, 2020, 2021), Americas (2020)
- Dual Clutch Module EU (2022), Asia (2019, 2020)
- AWD Systems EU (2019, 2020), Asia (2019, 2020), Americas (2020)
- EGR Cooler EU (2018, 2019, 2020, 2021, 2022), Asia (2018, 2019, 2020, 2021), Americas (2018, 2020)



#### Significant Revenue Contribution from Hybrid Awards



- Complete P2 On-Axis Module Asia (2020, 2021)
- P2 On-Axis Stator EU (2019)
- Wet disconnect and controls for P2 Asia (2019, 2020)
- Chain drive for P3 EU (2018)
- 200V MGU for P0 EU (2019), Asia (2019)
- Exhaust Heat Recovery System Americas (2019)
- 48V eBooster® EU (2019, 2021)

### Awards Across Products, Regions and Customers



- eGearDrive® Transmission Asia (2018 (3), 2019 (3), 2021)
- Electric Drive Module Asia (2018 (3) 2019 (3))
- Electric Drive Module N. America (2019)
- Electric Drive Motor N. America (2018)
- CV Electric Drive Motor EU (2019, 2020)
- Cabin Air Heater Asia (2018)
- HV Coolant Cabin & Battery Heaters EU (2021), Asia (2021)
- Power Electronics EU (2020, 2021), Asia (2018, 2019)
- Turbine Range Extender (2019)
- Commercial Vehicle (Bus) Charging Station EU (2018)

